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Hoffmannias from Mexico and Central America

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Standley, in preparing an account of *Hoffmannia* for the "North American Flora," described nine new species of the genus (Contr. U. S. Nat. Herb. 20: 203-207. 1919) for North America and commented "They must be of very local distribution, for it is unusual to find in herbaria more than two or three specimens of any species."

Dr. John D. Dwyer who prepared an account of "The genus *Hoffmannia* in Panama," (Ann. Mo. Bot. Gard. 56: 269-286. 1969) added considerably to our knowledge of the genus. He commented that "The fact that eleven new species are described in this paper suggests the need for an intensification in the collecting of the genus, at least in Central America."

We have now more material of *Hoffmannia* from southern Mexico and Central America than has been available to anyone previously. A revision of this material merely to prepare a new account for the "Flora of Guatemala" confirms the statements of Drs. Standley and Dwyer. There are certainly more species of *Hoffmannia* in our collection than have been recognized. Many of these seem to be reasonably local in distribution. There are species in Guatemala that most probably are different than those that will appear in the "Flora"—usually the material is inadequate, very often lacking flowers.

How many other species of *Hoffmannia* exist in the isolated but unvisited cloud forests of Central America we do not know. Species of *Hoffmannia* seem to be rather restricted in range and many species are of the high, wet forests, so it is quite likely that there are still many species to be discovered.

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51

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Hoffmannia bullata L. Wms. sp. nov.

Plantae herbaceae aut leviter suffruticosae, usque ad 60 cm. altae. Folia obovata oblonga vel oblanceolata acuta vel obtusa petiolata bullata; inflorescentiae axillares subumbellatae vel subracemosae, pedunculus gracilis glaber vel sparse pilosus, pedicelli graciles; calyx glaber, lobi triangulares vel lanceolato-triangulares, acuti; corolla ca. 1 cm. longa, lobi oblongi obtusi vel acuti; baccae rubrae.

Herbaceous or somewhat woody plants 10–60 cm. tall, erect or repent. Stems simple, subterete or terete, densely ferrugineous-villous or glabrate, leafy above; leaves obovate to oblong or oblanceolate, acute or obtuse, long-attenuate to the base, short petiolate, bullate, pubescent or puberulent with segmented hairs along the nerves below, glabrous or glabrescent above, the blade 9–20 cm. long and 3–7 cm. broad, the lateral nerves 8–15 pairs, the petioles mostly 1–3 cm. long, stout, pubescent or glabrescent; inflorescences axillary, subumbellate or subracemose, the peduncles slender, 3–7 cm. long, glabrous or sparsely pilose pubescent, pedicels slender, 2–5 mm. long; flowers 3–10, dull brick red; calyx and hypanthium 3–4 mm. long, the hypanthium turbinate, glabrous, the calyx lobes triangular or lance triangular, acute, sparsely villosulose; corolla about 1 cm. long, glabrous, the lobes oblong, obtuse or acute, 2–3-times as long as the tube; stamens with short filaments, the anthers exserted; berry bright red.

Mexico: Finca Irlandia, Chiapas, June 1914, *Purpus 7114*.

Guatemala: damp dense forest, erect, simple succulent herb, fruits red, Finca Pirineos below Santa María de Jesus, Dept. Quezaltenango, alt. 1,350–1,380 m., March 11, 1939, *Standley 68234*, *68239*; wet wooded quebrada, herb 30–60 cm. tall, common, fruit red, along old road between Finca Pirineos and Patzulín, Dept. Quezaltenango, alt. 1,200–1,400 m., Feb. 9, 1941, *Standley 86752*; herb, leaves deeply and strikingly rugose on both sides, forest along quebrada San Gerónimo, Finca Pirineos, lower south facing slope of Volcán Santa María, between Santa María de Jesus and Calauaché, Quezaltenango, alt. 1,300–2,000 m., Jan. 1–2, 1940, *Steyermark 33384*; wooded slopes, Volcán Zunil, vicinity of Finca Los Nubes east of Pueblo Nuevo, Dept. Suchitepéquez, alt. 500–800 m., Feb. 2, 1940, *Steyermark 35425*; above Finca El Porvenir, slopes of Volcán Tajumulco, alt. 1300–1500 m., March 7, 1940, *Steyermark 37241*; terrestrial herb along creek in jungle, leaves very rugose on both sides, rich green above with gray-green mid-rib, silvery or pale green beneath, peduncle reddish, pale green at top, calyx pale green, corolla lobes spreading, salmon-brick color, anthers pale yellowish-white, as is stigma; between Virginia and Lago Izabal, Montaña del Mico, Dept. Izabal, alt. 50–100 m., April 4, 1940, *Steyermark 38719* (type, F); slopes of Volcán Santa Clara, 1½–2 miles west of Finca El Naranjo, alt. 1,250 m., June 1, 1942, *Steyermark 46816*; leaves deeply

rugose on both sides, dense rich forest between Ixcan and Río Ixcan, Dept. Huehuetenango, alt. 150–200 m., July 23, 1942, *Steyermark 49360*; cultivated specimen from wet wooded slopes near Villa Jesus on road from Puerto Barrios to Guatemala, alt. 100 m., Nov. 8, 1959, *Moore 8263*.

Guatemala: The following sterile or essentially sterile collection doubtless belong to this species—*Standley 66907, 86663; Steyermark 38901, 41710, 44988, 45044, 46816*.

British Honduras: prostrate herb, 2 ft. long, in forest, Río Viejo, alt. 1,300 ft., Nov. 20, 1933, *Schipp S-623*.

Honduras: wet mountain forest, Lancetilla Valley near Tela, Dept. Atlántida, alt. 20–600 m., Dec. 6, 1927—March 20, 1928, *Standley 52642, 53491*; moist floor of dense forest near Lancetilla, alt. 150 ft., Aug. 18, 1934, *Yuncker 5038*.

Costa Rica: *Brenes 5626, 13672; Burger et al. 4395, 6981; Jiménez 1372, 2467; León 171; Molina et al. 17548; Raven 20923; Schnell 806; Smith A 733; Weston 5067*.

This is a mass of material all except one specimen having been collected since Standley prepared an account of the genus for the "North American Flora." The material from Costa Rica, cited here by collector and number only, may be distinct from that of northern Central America and Mexico but of that available not a single collection has adequate flowers for study.

Most of these specimens will be found in herbaria under the name of *Hoffmannia refulgens* (Hook.) Hemsl.—certainly a related species for which the type (see Hooker, Bot. Mag. 88: *t.* 5346. 1862) was horticultural material presumed to be from South America. Our species differs in having much smaller flowers and in other details.

***Hoffmannia culminicola* Standl. & L. Wms. Ceiba 1: 166. 1950.**

A species allied to *H. angustifolia* Standl. to which it has been referred. The fewer lateral nerves (5–8 pairs) will distinguish it from *H. angustifolia* (11–15 pairs) when in flower or fruit; the smaller triangular and acute calyx lobes, not lance-oblong and obtuse, and smaller corollas will distinguish it. The species occurs in the cloud forests of western Guatemala, El Salvador and to central Honduras. It is now undoubtedly exterminated in El Salvador as the last of the cloud forest has been cut down.

The following specimens, mostly distributed as *H. angustifolia* should bear this name:

Guatemala: *Steiermark* 31050, 32320.

El Salvador: *Carlson* 895, 903.

Honduras: *Carlson* 2452; *Glassman* 2034; *Molina* 5061, 10235, 10836; *Molina & Molina* 25578; *Standley* 4797 (type), 15645; *Williams & Molina* 10019, 10395, 11141, 11236, 12080, 12503, 14819, 14934; *Williams, Molina & Merrill* 15623; *Valerio* 757, 1752, 1790, 1793.

Hoffmannia excelsa (HBK.) Schum. in Martius, Fl. Bras. 6, pt. 6: 327. 1889; Standl. No. Am. Fl. 32: 197. 1934. *Psychotria excelsa* HBK. Nov. Gen. & Sp. Pl. 3: 355, t. 282. 1819.

This Mexican plant, beautifully illustrated as *Psychotria excelsa*, has been credited to Guatemala in recent years by Dr. Standley and some 20 collections referred here. The Guatemalan plants, so far as the material is determinable, is a species with clavate, not bifid, styles and with other characters to separate it from *H. excelsa*. There may be more than one species in the material from Guatemala but that with good flowers is described below as *H. montana*.

Hoffmannia gesnerioides (Oerst.) Kuntze, Rev. Gen. Pl. 285. 1891. *Ophryococcus gesnerioides* Oerst. Vid. Medd. Kjoebenh. 1852: 53. 1852.

Originally described from Nicaragua and we have recollected it in the montane forest there a dozen times in recent years (*Molina* 20371, 20450; *Williams et al.* 23523, 23950, 24708, 24727, 24805, 24909, 27615, 27728, 29177, 29235). This species is also known from Honduras. A fruiting collection, *Steiermark* 31611, from Guatemala, has been referred here but it seems likely that it is not *H. gesnerioides*.

Hoffmannia liesneriana L. Wms. sp. nov.

Plantae herbaceae vel suffruticosae 1.5 m. altae vel ultra, caules quadrangulares vel teretes glabrescentes. Folia ovata vel oblongo-ovata acuta longe petiolata; inflorescentiae cymosae breviter pedunculatae axillares multiflorae compactae; pedunculi graciles; pedicelli perbreves; ovaria quadrangularia; calyx usque ad basem lobatus, lobi carnosii lineares acuti cucullati; corolla parva extus puberula, tubus brevis, lobi oblongo-lanceolati acuti; stamina exserta; stylus lanceiformis.

Forest herbs or suffruticose herbs 1.5 m. tall or perhaps taller, the stems leafy above often leafless below, quadrate and becoming terete with age, glabrous or nearly so, up to 1 cm. in diameter. Leaves ovate to oblong-ovate, acute, abruptly attenuate into a long slender petiole, glabrous, or puberulent on nerves and petiole, with 15-18 pairs of principal lateral nerves, these anastomosing near the margin, the blade 14-22 cm. long and 5-12 cm. broad, the petiole to 7 cm. long;

inflorescences axillary, commonly on leafless lower part of the stem, sometimes at ground level, many-flowered, compact, short-pedunculate cymes, puberulent; peduncles slender, up to 3 cm. long; pedicels very short or almost none; young ovaries 4-(5-) angled, obscurely rufous puberulent or glabrescent, about 2.5 mm. long at anthesis; calyx lobate to the base, the lobes linear, acute, cucullate, fleshy, triquetrous in cross-section, rufous puberulent, about 3-3.5 mm. long and 0.7-1 mm. broad at the base; corolla small, 6-8 mm. long at anthesis, puberulent outside, the tube 3.5-4 mm. long slightly exceeded by the calyx lobes, the lobes oblong-lanceolate, acute, 4-4.5 mm. long and 1.5-2 mm. broad; stamens attached near middle of tube, the filaments very short, the anthers about 4 mm. long, exerted from throat of corolla; style lanceiform, about 5-6 mm. long, simple, the stigma half the length of the style; fruits not known.

Costa Rica: inflorescencia helicoidal axilar color rojo castaño hierba de tallos carnosos y cuadrangulares, estipulas caducas, frutos rojos, en borde de bosque 2 millas al norte de Diamantes, Guápiles, Pcia. Limón, alt. 150 m., Agosto 9, 1963, *Jiménez 1054* (type, F); flores rojo oscuro, arracimadas en la base del tallo, en bosque cercano al Río Toro Amarillo, 6 Km. al suroeste de Guápiles, Pcia. de Limón, alt. 400 m., Julio 18, 1964, *Jiménez 2127*; forest floor, about 1.5 m. tall, remnant forest near Tirimbina east of Río Sarapiquí, Prov. Heredia, alt. 150-250 m., 12-15 August 1971, *Burger & Burger 8050*.

One of the largest of the Costa Rican species, resembling *H. cauliflora* Hemsl. of Guatemala. Distinguished easily from other Central American species by the compact inflorescences usually on leafless portion of the stem, the long narrow cucullate calyx lobes, and the relatively small flowers.

Hoffmannia montana L. Wms. sp. nov.

Frutices graciles ramosissimi usque ad 3 m. altos. Folia opposita vel raro ternata anguste ad late oblanceolata longe acuminata, ad basem attenuata glabra vel subtus sparse pubescentia; inflorescentiae axillares, breviter pedunculatae, pedunculi subfiliformes, pedicelli filiformes; hypanthium turbinatum; calyx ad basem divisum, lobi triangulares usque ad 1 mm. longos glabri; corolla fere ad basem divisam, lobi lineari-lanceolati acuti glabri; antherae lineares; stylus filiformis integer, stigma clavato-lanceiformia.

Much branched slender shrubs 1.5-3 m. tall. Branches at first somewhat quadrangular and sparsely bifariously fulvous pubescent in the intervals, or soon becoming terete and glabrous; leaves opposite or rarely ternate, narrowly to broadly oblanceolate, long acuminate, attenuate to a short petiole, glabrous or sparsely pubescent on petiole and nerves of under side of leaf but soon glabrous, nerves 4-7(-8) pairs diverging at an obtuse angle, blades (3-)4-8 cm. long and (0.6)2-3 cm. broad, petioles mostly 0.5-1.5 cm. long; inflorescence axillary, short-pedunculate, 1-few-flowered; peduncles subfiliform, 2-15 mm. long; pedicels filiform, mostly 3-10 mm. long; hypanthium and calyx at anthesis turbinate, 2-3 mm. long; calyx divided to or near the base, the lobes triangular, 0.5-1 mm. long,

glabrous; corolla white to pale yellow, up to 1 cm. long, lobate to near the base, the lobes linear-lanceolate, acute, glabrous, 5–7 mm. long, the tube 1–2 mm. long; stamens exserted in the throat, the filaments short, anthers linear, 2.5–3.5 mm. long, exserted; style filiform, simple, about 5–8 mm. long, the stigma clavate-lanceiform, undivided, 4–5 mm. long; mature fruits fleshy, to about 5–6 mm. in diameter.

The type from Guatemala: slender shrub to 6 ft. high, flowers white, heavy dicot forest, Volcán Zunil, Dept. Quezaltenango, alt. 8,000 ft., August 4, 1934, *Skutch 936* (type, F). (Distributed as *Deppea* sp.).

Additional specimens, in F, by collector and numbers:

Mexico: *Matuda 2984, 4561*.

Guatemala: *Standley 67873, 67896, 67937, 68150, 68534, 68569, 68644, 85006, 85055, 85105, 85175, 85619, 86217, 86222, 86346, 86414, 86638; Steyermark 36409, 36810, 36814, 37296, 37395, 46676, 46855; Williams, Molina & Williams 25575, 26296; Williams, Molina, Williams, Gibson & Laskowski 26785, 27138*.

This montane or cloud forest species has been confused with the Mexican *H. excelsa* (HBK.) Schum., a species not known south of the state of Veracruz but is easily distinguished by the undivided style instead of the style with bifid stigma, other details of the flower also help to distinguish the species.

The plant is common and often abundant in the rich cloud forest on the slopes of the Sierra Madre facing the Pacific from Chiapas in Mexico to San Marcos, Quezaltenango, and Suchitepéquez in Guatemala.

Specimens available, as is commonly the case in *Hoffmannia*, often lack corollas. Cystoliths, as in many Hoffmannias, are common in most parts of the plant.

Hoffmannia nicotanaefolia (Mart. & Gal.) L. Wms. comb. nov. *Psychotria nicotanaefolia* Mart. & Gal. Bull. Acad. Brux. 11, pt. 1: 229. 1844 (phototype, F). *Hoffmannia lenticellata* Hemsl. Diag. Pl. Mex. 30. 1879. *Aegiphila hoffmannioides* Standl. & Steyer. Field Mus. Bot. 23: 277. 1947.

A fairly common plant in southern Mexico and in Guatemala, rare in British Honduras and Honduras. It is distinguished by the truncate or but shallowly lobate calyx, the corolla lobes twice as long as the tube, the pedunculate cymose inflorescences shorter than the petioles. The undersurface of the leaves and most especially the mid-nerves have conspicuous, elongate, parallel cystoliths.

Hoffmannia oreogena L. Wms. sp. nov.

Frutices fragiles parvi usque ad 2 m. alti. Folia elliptica vel oblanceolato-elliptica abrupte acuminata, ad basem acuta vel cuneata, petioli longi graciles fulvo-pilosi; inflorescentiae axillares cymoso-fasciculatae leviter pilosae paucipluriflorae, pedunculi fere nuli, pedicelli graciles; hypanthium fere 3 mm. longum, calyx brevis, lobi triangulares acuti leviter carnosii sparse pilosi; corolla profunde 4-lobata, lobi lineari-lanceolati acuti; stamina 4 exserta, antherae angusti-oblongae 2.5–3 mm. longae; stylus exsertus, stigma bifidum; fructus maturus ignotus.

Small fragile shrubs 0.5–2 m. tall, the stems usually much branched, terete, glabrous or nearly so, the internodes up to 6 cm. long. Leaves elliptic or oblanceolate-elliptic, abruptly acuminate, acute or cuneate to the petiole, with 10–14 pairs of lateral nerves, the blade 6–15 cm. long and 2–5 cm. broad, glabrous except short fulvous-pilose along the nerves below, the petiole long and slender, fulvous-pilose, to 4 cm. long; inflorescences axillary or at the nodes on older wood, cymose-fasciculate, somewhat pilose, few-many-flowered, the peduncles almost none, the pedicels slender, to 3 mm. long; hypanthium and calyx about 3 mm. long at anthesis, soon elongating to 6–7 mm. and cylindric, the calyx lobes sparsely fulvous pilose with short multicellular hairs, triangular, acute, somewhat fleshy, about 0.5–0.75 mm. long; corolla deeply 4-lobate, about 8–9 mm. long, the tube about 4–5 mm. long and the linear-lanceolate acute lobes 4–5 mm. long; stamens 4, exserted, the filaments attached below the throat of the corolla and at the base of the anther, anthers narrowly oblong, 2.5–3 mm. long; style exserted, 8–9 mm. long, the stigma bifid and 1–1.3 mm. long; mature fruit unknown.

Honduras: shrub 0.5–1 m., common in forest, El Portillo on Cordillera de Merendón, 20 Km. from Nuevo Ocotopeque, Dept. Ocotopeque, alt. 1,800 m., Aug. 28, 1968, *Molina 22360*; flores cremas, arbusto 2 m., bosque nebuloso de Montaña Verde, aldea Las Marías, Cordillera Guajiquiro, Depto. La Paz, alt. 2,100 m., Mayo 23, 1964, *Molina & Molina 14052* (type, F; EAP).

This cloud forest species is one of the easiest to distinguish of the Central American mountain species. The small calyx with short brownish hairs, the elongated hypanthium, the dense nearly sessile inflorescences, and the bifid style are diagnostic. We have distributed the species as *H. angustifolia* to which it is probably not closely allied.

Hoffmannia oreophila L. Wms. sp. nov.

Frutices vel arbores usque ad 5 m. Caules simplices vel ramosi teretes obscure puberulenti vel glabrescenti; folia lineari-oblonga vel late oblanceolata abrupte acuminata ad basem attenuata, petioli puberulenti; inflorescentiae axillares subumbellatae vel subracemosae pedunculatae ca. 6-florae, pedunculi graciles, pedicelli subfiliformes; hypanthium urniformia, angulatum, calyx perbrevis, lobi lati obtusi; corolla campanulata, lobi lanceolati acuti; stylus exsertus clavatus integer.

Shrubs or small trees 1–5 m. tall. Stems simple or branched, terete, obscurely puberulent but soon glabrous; leaves linear-oblong to broadly oblanceolate, abruptly short acuminate, attenuate to the base, principal lateral nerves 7–11 pairs, anastomosing near the margin, the blades 11–25 cm. long and 2.5–5.5 cm. broad, the petioles obscurely puberulent, 1–1.5 cm. long; inflorescences in axils of leaves or at nodes on older stems, abundant, subumbellate or subracemose, pedunculate, about 6-flowered, peduncle slender, about 1.2 cm. long or less, pedicels subfiliform, 1–3 mm. long, hypanthium and calyx small, urniform at anthesis, prominently angled, 2–2.5 mm. long, the calyx to 0.5 mm. long, the lobes broad and obtuse, less than 0.5 mm. long, slightly marginate; corolla ca. 5–6 mm. long, glabrous, white to pale yellow, campanulate, the lobes lanceolate, acute, about 4 mm. long and 1.5 mm. broad at the base, the campanulate tube ca. 2 mm. long, stamens exserted, filaments attached near middle of corolla tube and above the base of anthers, anther narrowly oblong, apiculate, about 4 mm. long; style exserted, clavate, the stigma undivided, about 1 mm. long; fruits not known.

Nicaragua: flowers pale yellow, shrub 1–2 m. tall, common in wet dense cloud forest area between El Triunfo and Fuente Pura, above Santa María de Ostuma, Dept. Matagalpa, alt. 1,800 m., March 8, 1967, *Molina 20361*; flowers cream, shrub 3 m. tall, cloud forest area at “Disparate de Potter,” near Santa María de Ostuma, Cordillera Central de Nicaragua between Matagalpa and Jinotega, Dept. Matagalpa, alt. 1,500 m., February 20, 24, 1963, *Williams, Molina & Williams 24709* (type F; EAP); flowers cream, tree 4 m. tall, road to La Fundadora, cloud forest area north of Sta. María de Ostuma, Cordillera Central de Nicaragua, Dept. Matagalpa, alt. 1,300–1,500 m., February 1963, *Williams, Molina & Williams 24904*; montane rain forest or cloud forest, Cordillera Central de Nicaragua, Dept. Matagalpa, alt. 1,500–1,600 m., Jan.–Feb. 1965, *Williams et al. 27663, 29166, 29214*.

The specimens of this species, which have been distributed as *H. angustifolia* Standl. all come from the very wet montane rain forest or cloud forest on the summit of the Cordillera Central de Nicaragua. Although we have collected in other high but disjunct cloud forests in Nicaragua, this species has not been found in any of them. The species does belong in the complex of cloud forest species found from southern Mexico as far south and east as the locality where this species has been found to be abundant. The short urniform hypanthium and calyx with much reduced and broad lobes, the campanulate corolla, the subumbellate or subracemiform inflorescences, the clavate style will serve to separate this species. The specimens in hand are uniform in being brownish in color (they were all originally preserved by the formaline method) and quite distinct from most other species in this characteristic.

Hoffmannia quadrifolia Standl. & Steyerl. Field Mus. Bot. 23: 250. 1947.

The type of this Guatemalan species, *Steyermark 42600*, is inadequate and there is some question whether or not the plant is a *Hoffmannia*. The stems are shining and straw colored as in no other species of *Hoffmannia*. The leaves are verticillate and quadrate. Species with ternate or binate and ternate leaves mixed are not uncommon. We will leave the species in the "Flora of Guatemala," calling attention to its unusual characters.

Hoffmannia sessilifolia L. Wms., Phytologia 25: 463, fig. 1973.

Guatemala: Dept. Baja Verapaz, alt. 1,600 m., January 2, 1973, *Williams, Molina & Williams 41977*.

Since the present paper was sent to press the above species was collected and published. It is easily distinguished from *H. ghiesbreghtii* (Lem.) Hemsl., its nearest ally, by sessile and usually very obtuse (at the base) or subcordate leaves and with the corolla tube half as long.

Hoffmannia teruae Williams & Molina, sp. nov.

Frutices debiles usque ad 2 m. altos. Folia elliptica vel oblanceolata acuminata glabra petiolata; inflorescentiae axillares fasciculatae sessiles; hypanthium turbinatum; calyx fere ad basem divisum, lobi lineari-lanceolati acuti ciliolati; corolla inter generis magnum, tubus angustus, lobi lineari-oblongi subacuti prope apicem apiculatos; stylus simplex clavatus; bacca desideratur.

Weak forest shrubs to 2 m. tall. Stems glabrous, terete, flowering stems to about 5 mm. in diameter, the internodes about 5 cm. long; leaves elliptic to oblanceolate, acuminate, glabrous, with about 11–13 pairs of lateral nerves not anastomosing, the angle rather acute, petiolate, the blade 10–22 cm. long and 2.5–6.5 cm. broad, attenuate into the 1–3 cm. long petiole; inflorescences axillary in the new growths, few-several-flowered nearly sessile fascicles, glabrous, peduncles none, pedicels 2–3 mm. long; hypanthium turbinate and 1.5–2 mm. long at anthesis; calyx divided almost to the base, lobes linear-lanceolate, 2.5–3 mm. long and 0.6–0.8 mm. broad, acute, ciliolate; corolla 16–18 mm. long at anthesis, the tube narrow and 8–9 mm. long, the lobes linear-oblong, 8–9 mm. long and about 2 mm. broad, subacute and apiculate thickened at the apex; stamens inserted in the throat of the corolla, the filaments rather thick, 3.5–4 mm. long, anthers linear, obtuse, about 4.5 mm. long; style about 18 mm. long, simple, clavate thickened at the apex and the stigmatic area about 4.5 mm. long; fruits not known.

Guatemala: shrub with pale green flowers, south facing slopes, Volcán Atitlán, Dept. Sololá, June 11, 1942, *Steyermark 47359*; flowers pale yellow, weak shrub 2 m. tall, wet mountain forest near Aldea Fraternidad, between San Rafael Pie de la Cuesta and Palo Gordo,

west facing slope of Sierra Madre Mountains, Dept. San Marcos, alt. 1,800-2,400 m., Dec. 10-18, 1963, *Williams, Molina & Williams 26028* (type, F; EAP).

An easily distinguished species because of the long narrow calyx lobes, these as long as the hypanthium, the fasciculate inflorescences, the clavate style, and narrow oblanceolate leaves. The only other species with long narrow calyx lobes in Guatemala is *H. calycosa* Donn.-Sm., a quite different lowland species.

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